

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
24 June 2004 (24.06.2004)

PCT

(10) International Publication Number
WO 2004/052904 A2

(51) International Patent Classification⁷: C07H 17/00 (74) Common Representative: PLIVA D.D.; Pravni Poslovi-Intelektualno vlasnistvo, Povrzenic, Nives, Ulica grada Vukovara 49, 10000 Zagreb (HR).

(21) International Application Number: PCT/HR2003/000062 (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date: 10 December 2003 (10.12.2003) (84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(25) Filing Language: English (26) Publication Language: English

(30) Priority Data: P20020991A 12 December 2002 (12.12.2002) HR

(71) Applicant (for all designated States except US): PLIVA D.D. [HR/HR]; Ulica Grada Vukovara 49, 10000 Zagreb (HR).

(72) Inventors; and (75) Inventors/Applicants (for US only): KUJUNDZIC, Nedjeljko [HR/HR]; Slavenskog 4, 10000 Zagreb (HR). BUKVIC, Krajacic, Mirjana [HR/HR]; Tjardoviceva 28, 10000 Zagreb (HR). BRAJSA, Karmen [HR/HR]; Jablanska 42, 10000 Zagreb (HR).

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2004/052904 A2

(54) Title: N"-Substituted 9a-N-(N'-carbamoyl- γ -aminopropyl), 9a-N-(N' -thiocarbamoyl- γ -aminopropyl), 9a-N-[N' -((β -cyanoethyl)-N'-carbamoyl- γ -aminopropyl] and 9a-N-[N' -(β -cyanoethyl)-N'-thiocarbamoyl- γ -aminopropyl] derivatives of 9-de

(57) Abstract: The invention relates to N"-substituted 9a-N-(N'-carbamoyl- γ -aminopropyl), 9a-N-(N' -thiocarbamoyl- γ -aminopropyl), 9a-N-[N' -((β -cyanoethyl)-N'-carbamoyl- γ -aminopropyl] and 9a-N-[N' -(β -cyanoethyl)-N'-thiocarbamoyl- γ -aminopropyl] derivatives of 9-deoxo-9-dihydro-9a-aza-9a-homoerithromycin A and 5-O-desosaminyl-9-deoxo-9-dihydro-9a-aza-9a-homoerithronolide A, novel semisynthetic macrolide antibiotics of the azalide series, of the general formula 1, wherein R represents H or cladinosyl moiety, R¹ represents H or (β -cyanoethyl moiety, R² represents isopropyl, 1-naphtyl, 2-naphtyl, benzyl, 2-(trifluoromethyl)phenyl, 3-phenylpropyl, β -phenylethyl, ethoxycarbonylmethyl, 1-(1-naphtyl)ethyl, 3,4,5-trimethoxyphenyl and 2,4-dichlorophenyl group, and X represents O and S, and their acceptable addition salts thereof with inorganic or organic acids, to the process for preparation of their pharmaceutical compositions as well as the use their compositions in the treatment of bacterial infections.